UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,517	10/24/2003	Hong Zhang	9-13528-204US	7428

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EXAMINER
PARK, JUNG H

ART UNIT	PAPER NUMBER
2619	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/691,517	ZHANG ET AL.
	Examiner	Art Unit	
	JUNG PARK	2619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *29 August 2007*.
2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-21* is/are pending in the application.
   4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☒ Claim(s) *17-22* is/are allowed.
6) ☒ Claim(s) *1,2,10 and 11* is/are rejected.
7) ☒ Claim(s) *3-9 and 12-16* is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☐ All   b) ☐ Some * c) ☐ None of:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____.
      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

U.S. Patent and Trademark Office
PTOL-326 (Rev. 08-06)   Office Action Summary   Part of Paper No./Mail Date 20080706

DETAILED ACTION

Response to Remark

1.   This communication is considered fully responsive to the Amendment filed on

09/26/2007.

      a. An objection to claim 22 is withdrawn since it has being amended accordingly.

      b. The rejection under 112 2nd is withdrawn since it has being amended accordingly.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -
(e) the invention was described in a patent granted on an application for patent by another filed in the United
States before the invention thereof by the applicant for patent, or on an international application by another
who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the
invention thereof by the applicant for patent.

3.   Claims 1, 2, and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Ma (US

7123620, "Ma").

      Regarding claim 1, Ma discloses a method for computing paths, the method

comprising:

    - using an abstracted map of the network (logical paths, see fig.7 and 8) that includes

network elements (NEs) (edge routers and users, see R1, R2, R7, R8, S1-S4, & D1-D2,

see fig.7) and subnetwork elements (SNEs) (routers for core network, see R3-R6 & R8

fig.7) with links between pairs of the NEs and the SNEs (between pairs of R2 & R3 and

R5 & R8, see fig.7) to construct a directed graph (logical paths as shown in fig.7 & fig.8)

that compensates for the subset intransitivity constraint (construct paths based on global

estimates of individual link cost to avoid congested links, i.e,, links generating subset

intransitivity constraints, see col.10, ln.52-67 and col.col.5, ln.16-25); and

- applying a routing algorithm (Dijkstra's algorithm, see col.10, ln.64) to compute paths

from a start node to the other nodes of the directed graph (determining paths between

links, see col.10, ln.52-55).

Regarding claim 2, Ma discloses, "wherein the routing algorithm used to compute

paths is Dijkstra's algorithm (Dijkstra's algorithm, see col.10, ln.64)."

Regarding claim 10, it is a claim corresponding to claim 1, except the limitation

of "a memory (a memory, col.2, ln.45-48) and program instructions (performing router

task in CPU, see col.2, ln.38-41)" and is therefore rejected for the similar reasons set

forth in the rejection of claim 1.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5.   Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ma.

Regarding claim 11, Ma discloses "a unidirectional path computed through the

directed graph (see fig.7 and fig.8) which is uniquely associated with an allowable bi-

directional route through the abstracted network map", but does not explicitly disclose,

"wherein the links are bi-directional network links". However, packet switched network is

designed for bi-directional links passing packets through determined route paths. That is,

clients in the network of fig.7 are source and/or destination. Therefore, it would have

been obvious to one of ordinary skill in the art at the time of applicant's invention to configure the network links as bi-directional network links in order to have an ability to move, transfer or transmit in both directions for clients.

Allowable Subject Matter

6.   Claims 17-22 are allowed.

7.   Claims 3-9 and 12-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

8.   Applicant's arguments filed have been fully considered but they are not persuasive.

At pages 10-11, applicant argues that Ma fails to disclose the subset intransitivity constraint because the situation is relevant only at the physical transport layer of the network and does not exist at higher layers of the protocol stack as ordinary skill in the art will recognize it.

In reply, the specification does not explicitly disclose and/or define on the subset intransitivity constraint and only defined in the preamble of the amended claims. Also, ordinary skill in the art does not recognize the subset intransitivity constraint since the examiner has searched the term in Internet and all applications related with network routing in EAST database of USPTO. No one uses the "subset intransitivity constraint" term in Internet and 330,583 applications in EAST database. Therefore, the term is not well defined in the art and the examiner does not agree to "subset intransitivity constraint is relevant only at the physical transport layer of the network and does not exist at higher

layers of the protocol stack as ordinary skill in the art will recognize it." The examiner

with Ph.D. in the Electrical Engineer has been in the network industrial field 6 years, but

can not recognize applicant's insists. Therefore, the examiner respectively disagrees.

At page 11, applicant argues that Ma fails to provide methods or systems "for

computing paths through a data network that includes a subnetwork which introduces a

subset intransitivity constraint on allowable paths through the network", as required by

the claims.

In reply, applicant does not claim the computing method in the body of claims,

but defined them in the preamble of the amended claims. Ma discloses the Dijkstra's

algorithm to compute paths to avoid the congested links which introduces a subset

intransitivity constraint on allowable paths through the network. Therefore, the examiner

respectively disagrees.

Conclusion

9.   Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the

advisory action. In no event, however, will the statutory period for reply expire later than

SIX MONTHS from the date of this final action.

Contact Information

10.   Any inquiry concerning this communication or earlier communications from the examiner

should be directed to Jung Park whose telephone number is 571-272-8565. The

examiner can normally be reached on Mon-Fri during 6:15-3:45.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Edan Orgad can be reached on 571-272-7884. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published

applications may be obtained from either Private PAIR or Public PAIR. Status

information for unpublished applications is available through Private PAIR only. For

more information about the PAIR system, see http://pair-direct.uspto.gov. Should you

have questions on access to the Private PAIR system, contact the Electronic Business

Center (EBC) at 866-217-9197 (toll-free).

Jung Park
Patent Examiner

/Edan Orgad/
Supervisory Patent Examiner, Art Unit 2619